

REMARKS

Claims 1 – 23 are pending in the application.

Claims 1 – 23 have been rejected.

Claims 1, 2, 4, 5, and 11 have been amended.

Objection to the Drawings

The drawings stand objected under 37 CFR 1.83(a). The March 13, 2003 Office Action (the “Office Action”) states that “a dedicated communications bus to communicates [sic] to the ingress receiver (there is not [sic] bus in Fig. 2) must be shown or the feature(s) canceled from the claim(s)” (Office Action, p. 2, sect. 1).

Applicant respectfully traverses this objection and submits that the drawings do indeed show a dedicated communications bus. For example, Figure 4 illustrates a dedicated communications bus 402 as claimed by Applicant and described on page 10 of the Specification. Accordingly, Applicant respectfully requests that this objection be withdrawn.

Claim Objections

Claims 1 – 14 stand objected to for insufficient antecedent basis. Claim 1 has been amended to address the Examiner’s objections. The amendment to claim 1 addresses the objection to claims 2 – 14 and is not intended to limit the scope of any of the claims.

Rejection of Claims under 35 U.S.C. § 112

Claims 2 – 5 & 11 – 14 stand rejected under 35 U.S.C. § 112, second paragraph. Claims 2, 4, 5 and 11 have been amended to address the Examiner's rejections. The amendment to claim 2 addresses the Examiner's rejection to claim 3, and the amendment to claim 11 addresses the rejection of claims 12 – 14. These amendments are not intended to limit the scope of the claims.

Rejection of Claims under 35 U.S.C. § 102

Claims 1 – 23 stand rejected under 35 U.S.C. 102(b) as being anticipated by Khacherian et al., U.S. Patent No. 5,768,257 (Khacherian).

Khacherian neither teaches nor suggests an apparatus for switching packets from a network including

an ingress receiver that receives packets from the network ("inbound packets"), said packets being destined for an *associated output queue* the output traffic manager . . . selectively drops outbound packets when the selected queue is *at a certain fullness level*, and *approximately when the output traffic manager drops outbound packets or is about to drop said outbound packets*, the output traffic manager communicates to the ingress receiver *to drop* inbound packets destined for the selected queue,

all as required by independent claim 1, and generally by independent claims 15 and 23.

Regarding the ingress receiver limitation, the Office Action cites to col. 2, lines 59 – 60 and source input port 210 in Figure 2 of Khacherian as teaching this limitation. Applicant respectfully disagrees. The relevant portion of Khacherian states

Discrete information units received at the input ports are buffered within the input buffer unit, and the input buffer control unit then generates a “Request” to release (from the input buffer unit) a “discrete information unit” destined for a particular output port.

(Khacherian, col. 2, lines 56 – 60).

Although Khacherian discloses discrete information units released to a *particular* output port, the cited portion of Khacherian does not teach that the particular output port
 → *is associated* with the input port. In contrast, Applicant’s claim 1, and 15 and 23 generally, recite an ingress receiver that receives packets . . . destined for an *associated output queue*.

Regarding the limitation of the output traffic manager selectively dropping outbound packets, the Office Action cites to col. 3, lines 7 – 10 of Khacherian as teaching this limitation. However, this portion of Khacherian discloses only a benefit of input buffering and output control, specifically the use of smaller buffers for the same level of cell drop performance provided with output buffering and output control. (Khacherian, col. 3, lines 7 – 10). Nowhere does this cited portion of Khacherian disclose how discrete information units are dropped or that the dropping of the discrete information units has a
 → dependency on the fullness of a queue. In contrast to Khacherian, Applicant’s claimed output traffic manager “selectively drops outbound packets *when the selected queue is at a certain fullness level*”, as recited in claim 1 and generally required in claims 15 and 23.

Regarding the limitation of communicating to the ingress receiver to drop inbound packets destined for the selected queue, the Office Action asserts that this limitation is disclosed in Khacherian at col. 8 lines 9-16. The Applicant respectfully disagrees.

First, the Applicant respectfully submits that Khacherian does not communicate to an ingress receiver *to drop* inbound packets, but rather *to release* them. Khacherian clearly states that the control information which is communicated back to the corresponding input buffer controller is “for *the release* of the discrete information unit to the switch fabric.” (Khacherian, col. 8, lines 15 – 16). In contrast to Khacherian, Applicant’s claims 1, and generally 15 and 23, recite that the output traffic manager communicates to the ingress receiver *to drop* inbound packets destined for the selected queue.

Second, Khacherian discloses that the communication to release the discrete information unit is performed in response “to the particular input buffer’s queue state information”. Applicant’s claimed output traffic manager, however, communicates to drop inbound packets *approximately when the output traffic manager drops outbound packets or is about to drop outbound packets*. Thus, the Applicant’s claimed output traffic manager communicates the dropping of packets regardless *of the queue state of the input buffer*.

Accordingly, for at least these reasons, Applicant respectfully submits that independent claims 1, 15, and 23 are allowable over Khacherian. Claims 2 – 14 depend from claim 1 and are allowable for at least this reason. Claims 16 – 22 depend from claim 15 and are allowable for at least this reason.

CONCLUSION

In view of the amendments and remarks set forth herein, the application is believed to be in condition for allowance and a notice to that effect is solicited. Nonetheless, should any issues remain that might be subject to resolution through a telephonic interview, the Examiner is invited to telephone the undersigned at 512-439-5080.

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Box Non-Fee Amendment, COMMISSIONER FOR PATENTS, Washington, D.C. 20231, on 4/18/03, 2003.



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4/18/03

Date of Signature

Respectfully submitted,



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VERSION WITH MARKINGS TO SHOW CHANGES MADE

The following is a "Marked Up" version showing the changes that the accompanying submission makes to the Specification and/or Claims of Serial No.

09/468,246:

In the Claims

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1. (Amended) An apparatus for switching packets from a network, the ~~switching~~ apparatus comprising:
 - an ingress receiver that receives packets from the network ("inbound packets"), said packets being destined for an associated output queue;
 - a switch fabric coupled to receive said inbound packets from the ingress receiver; and
 - an output traffic manager coupled to receive packets from the switch fabric ("outbound packets"), wherein
 - the output traffic manager includes at least one queue,
 - the output traffic manager selectively stores outbound packets into a selected queue and selectively drops outbound packets when the selected queue is at a certain fullness level, and
 - approximately when the output traffic manager drops outbound packets or is about to drop said outbound packets, the output traffic manager communicates to the ingress receiver to drop inbound packets destined for ~~that~~ the selected queue.

2. (Amended) The apparatus of Claim 1, wherein the output traffic manager identifies at least ~~the~~ a designation of imminently droppable or dropped outbound packets, and wherein the ingress receiver drops inbound packets based on the ~~identified~~ designation.

4. (Amended) The apparatus of Claim 2, wherein the designation comprises a class of service.

5. (Amended) The apparatus of Claim 2, wherein the designation comprises a virtual private network.

11. (Amended) The apparatus of Claim 10, wherein the output traffic manager identifies ~~the~~ a designation of imminently droppable or dropped outbound packets and wherein the plurality of ingress receivers drop inbound packets having the ~~identified~~ designation.